

WHITE LINE DISEASE AND SOLE BRUISING: THE MOST COMMON CAUSES OF LAMENESS IN THE IRISH GRAZING HERD

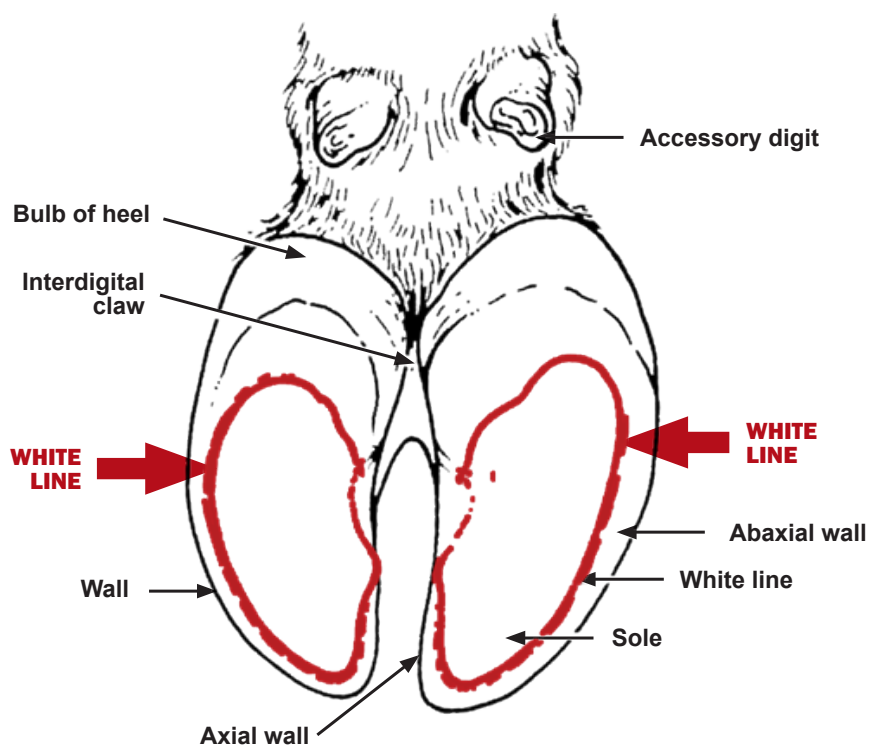
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White line disease and sole bruising are the most common hoof lesions that we see when cows leave the sheds and head to the paddocks for the grazing season. It is useful to consider these conditions together as they are both non-infectious and have similar causes and risk factors. When we think about preventative measures, similar actions are required to achieve a reduction in the number of cases of both of these conditions.

What is white line disease?

To understand how white line disease develops, we need to know what is meant by the term white line in relation to the sole of the cow's foot. The hoof comprises of a horn capsule surrounding the sensitive tissue of the foot. This horn is constantly growing (similar to the human nail) and constantly being worn down. The horn of the sole grows from the tissue underlying the sole of the foot. The horn that makes up the hoof wall grows down from the top of the hoof (where the hair line ends) to join with the horn growing from the sole. Where the two meet is a cemented junction called the white line.

As this is a cemented or welded junction, it is a point of weakness on the sole and is vulnerable to being damaged as the cow walks on hard surfaces.

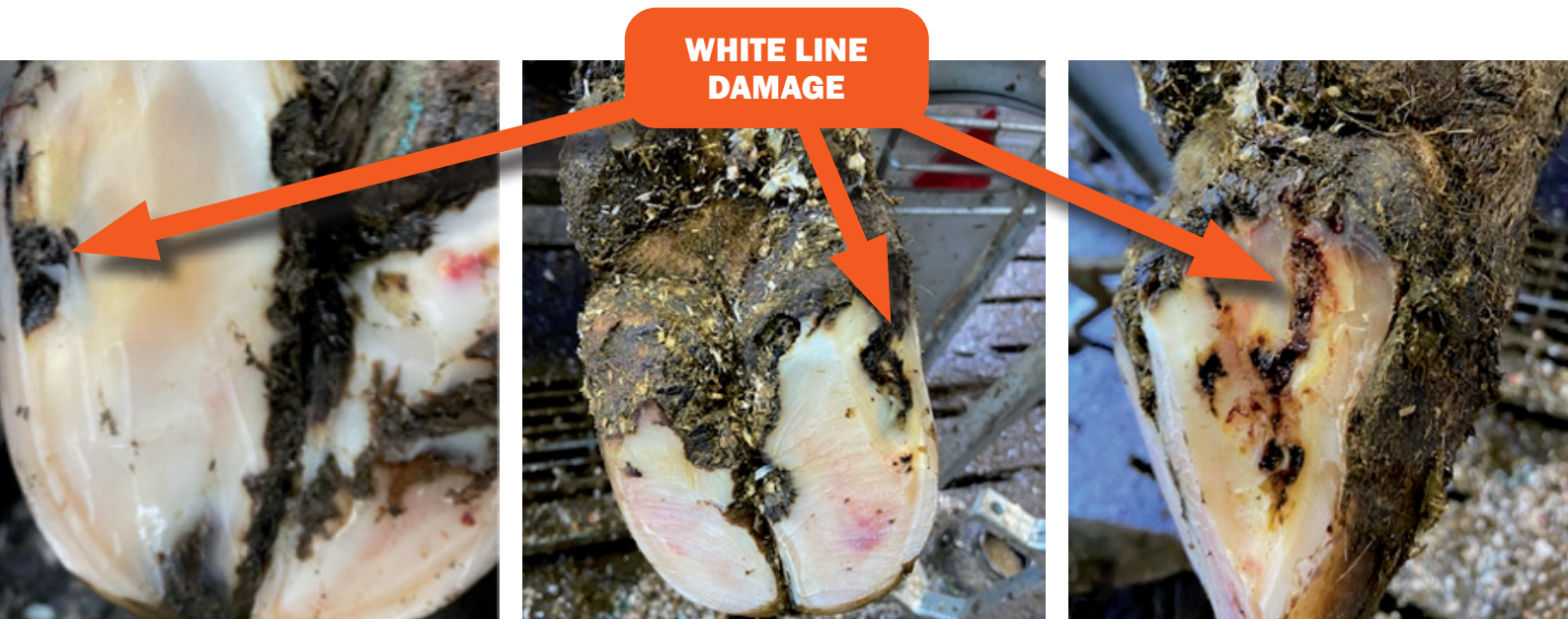


What does white line disease look like?

It appears as a defect or gap in the white line of the hoof which is the join between the horn of the sole and the horn of the wall.

In grazing animals, it occurs most commonly towards the heel on the outer claw of the hind foot.

Early damage or lesions appear as bruising, discolouration or separation (as in above picture). As the condition progresses, grit or stones may become embedded in the area and can penetrate into the sensitive tissue of the foot leading to inflammation, underrunning of the horn and the production of pus at the site. This penetration is due to physical trauma and shearing forces (occurring when turning sharply on a hard surface).



Treating White Line Disease

Treatment involves careful examination to identify the extent of the lesion. Using the Dutch 5 Step method of hoof trimming, the damaged wall/sole is removed. A block may be applied to the sound claw to reduce pain for the cow and support mobility.

What is sole bruising?

Sole bruising is due to damage to the germinal layer of cells (the quick) that lie immediately under the sole horn and are responsible for the production of sole horn. Factors that contribute to sole bruising include standing on concrete for long periods, aggressive pushing of cows on roadways, rough roadway surfaces, excessive body condition loss and excessive walking.

Treating Sole bruising

Treatment for sole bruising involves resting the cow on a soft surface, e.g. by placing her on a straw bed or keeping her in a paddock near the parlour and possibly milking once a day to reduce time spent walking. If only one claw is affected, the application of a block to the sound claw should be considered. As always with cows that are lame, consideration should be given to supplying extra concentrate feed as the ability of these cows to graze is often greatly impaired.



Dos and Don'ts in prevention of White Line Disease and Sole Bruising

- Do give cows time to walk at their own pace, to see surface hazards and avoid them
- Do give cows space in roadways yards and sheds.
- Do allow cows to exit the parlour and move to the paddock, rather than keeping them in a holding yard.
- Do consider the use of a Batt Latch (automatic paddock gap opener) for 2025 grazing season which will allow cows to leave paddock and walk to parlour at their own pace.
- Do construct and maintain good even roadway surfaces with some fine material on top.
- Don't push or rush cows on roadways with a dog or quad bike.
- Don't have cows standing in yards either before or after milking for any longer than is necessary.